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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/796,502

03/08/2004

David Mendel

174/308

3014

36981

7590

09/28/2006

FISH & NEAVE IP GROUP

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EXAMINER

BROWN, MICHAEL J

ART UNIT

PAPER NUMBER

2116

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/796,502	Applicant(s) MENDEL ET AL.	
	Examiner Michael J. Brown	Art Unit 2116	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-95 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-95 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-6, and 72-75, drawn to evaluating signals and determining lowest power wire.
  - II. Claims 7-15, and 65-71, drawn to evaluating logic elements and determining the state of the output.
  - III. Claims 16-22, drawn to evaluating logic arrays.
  - IV. Claims 23-28, drawn to evaluating logic information and maintaining a logic state.
  - V. Claims 29-39, 56, and 89, drawn to evaluating transistors and reverse/forward biasing.
  - VI. Claims 40-46, drawn to evaluating a portion of a clock network.
  - VII. Claims 47-55, drawn to determining if a transistor can be replaced with a stack of transistors.
  - VIII. Claims 57-60, and 64, drawn to determining if PLD is in stand by/power down mode.
  - IX. Claims 61-63, drawn to a routing pool device.
  - X. Claims 76 and 95, drawn to minimizing use of multiplexers and minimizing the occurrence of no input multiplexers.
  - XI. Claims 77-80, drawn to a device with a plurality of power-down portions.

- XII. Claims 81-84, drawn to a device with a plurality of sub-regions containing transistors.
- XIII. Claims 85-87, drawn to unused routing that is tied OFF.
- XIV. Claim 88, drawn to a device with a plurality of transistors with a portion of the transistors being stacked in series.
- XV. Claims 90-94, drawn to evaluating a logic element and searching for a second logic element, which if routed on routing that is proximal to the first element, reduces leakage.

The inventions are distinct, each from the other because of the following reasons:

- 2. Inventions I and (II-VIII, X, and XV) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination I has separate utility such as a lowest power wire. See MPEP § 806.05(d).
- 3. Inventions II and (III-VIII, and XV) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination II has separate utility such as evaluating a logic element. See MPEP § 806.05(d).
- 4. Inventions III and (IV-VIII, and XV) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not

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overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination III has separate utility such as evaluating a logic array block. See MPEP § 806.05(d).

5. Inventions IV and (V-VIII, and XV) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination IV has separate utility such as evaluating whether logic information is necessary. See MPEP § 806.05(d).

6. Inventions V and (VI-VIII, and XV) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination V has separate utility such as evaluating whether a transistor or group or transistors is used. See MPEP § 806.05(d).

7. Inventions VI and (VII-VIII, and XV) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination VI has separate utility such as evaluating whether a portion of the clock network may be turned off. See MPEP § 806.05(d).

8. Inventions VII and (VIII and XV) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination VII has separate utility such as determining whether a transistor can be replaced by a stack of transistors. See MPEP § 806.05(d).

9. Inventions VIII and XV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination VIII has separate utility such as determining whether the programmable logic device is in standby mode. See MPEP § 806.05(d).

10. Inventions IX and (XI-XIV) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination IX has separate utility such as a routing pool. See MPEP § 806.05(d).

11. Inventions X and XV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination X has separate utility such as minimizing the use of multiplexers. See MPEP § 806.05(d).

12. Inventions XI and (XII-XIV) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination XI has separate utility such as a plurality of power-down portions. See MPEP § 806.05(d).

13. Inventions XII and (XIII-XIV) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination XII has separate utility such as a plurality of sub-regions. See MPEP § 806.05(d).

14. Inventions XIII and XIV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination XIII has separate utility such as unused routing being tied OFF to a VCC or a GROUND. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a

claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

15. Inventions I and IX are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a signal can be conducted on the lowest power wire does not require a routing pool.

16. Inventions I and XI are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a signal can be conducted on the lowest power wire does not require a plurality of power-down portions.

17. Inventions I and XII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a signal can be conducted on the lowest power wire does not require a plurality of sub-regions.



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18. Inventions I and XIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a signal can be conducted on the lowest power wire does not require unused routing that is tied OFF to Vcc or GROUND.

19. Inventions I and XIV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a signal can be conducted on the lowest power wire does not require a plurality of transistors.

20. Inventions II and IX are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating a logic element does not require a routing pool.

21. Inventions II and XI are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP §

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806.05(e)). In this case evaluating a logic element does not require a plurality of power-down portions.

22. Inventions II and XII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating a logic element does not require a plurality of sub-regions.

23. Inventions II and XIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating a logic element does not require unused routing that is tied OFF to one Vcc or GROUND.

24. Inventions II and XIV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating a logic element does not require a plurality of transistors.

25. Inventions III and IX are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be

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practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating a logic array block does not require a routing pool.

26. Inventions III and XI are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating a logic array block does not require a plurality of power-down portions.

27. Inventions III and XII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating a logic array block does not require a plurality of sub-regions.

28. Inventions III and XIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating a logic array block does not require unused routing that is tied OFF to one Vcc or GROUND.

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29. Inventions III and XIV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating a logic array block does not require a plurality of transistors.

30. Inventions IV and IX are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether the logic information is necessary for operation of a programmable logic device does not require a routing pool.

31. Inventions IV and XI are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether the logic information is necessary for operation of a programmable logic device does not require a plurality of power-down portions.

32. Inventions IV and XII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus

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as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether the logic information is necessary for operation of a programmable logic device does not require a plurality of sub-regions.

33. Inventions IV and XIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether the logic information is necessary for operation of a programmable logic device does not require unused routing that is tied OFF to one Vcc or GROUND.

34. Inventions IV and XIV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether the logic information is necessary for operation of a programmable logic device does not require a plurality of transistors.

35. Inventions V and IX are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a transistor or group of transistors is used for a design does not require a routing pool.

36. Inventions V and XI are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a transistor or group of transistors is used for a design does not require a plurality of power-down portions.

37. Inventions V and XII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a transistor or group of transistors is used for a design does not require a plurality of sub-regions.

38. Inventions V and XIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a transistor or group of transistors is used for a design does not require unused routing that is tied OFF to one Vcc or GROUND.

39. Inventions V and XIV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP §

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806.05(e)). In this case a plurality of transistors does not require evaluating whether a transistor or group of transistors is used.

40. Inventions VI and IX are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a portion of a clock network may be turned off does not require a routing pool.

41. Inventions VI and XI are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a portion of a clock network may be turned off does not require a plurality of power-down portions.

42. Inventions VI and XII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a portion of a clock network may be turned off does not require a plurality of sub-regions.

43. Inventions VI and XIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be

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practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a portion of a clock network may be turned off does not require unused routing that is tied OFF to one Vcc or GROUND.

44. Inventions VI and XIV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a portion of a clock network may be turned off does not require a plurality of transistors.

45. Inventions VII and IX are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case determining whether a transistor can be replaced by a stack of transistors in series does not require a routing pool.

46. Inventions VII and XI are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case determining whether a transistor can be replaced by a stack of transistors in series does not require a plurality of power-down portions.



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47. Inventions VII and XII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case determining whether a transistor can be replaced by a stack of transistors in series does not require a plurality of sub-regions.

48. Inventions VII and XIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case determining whether a transistor can be replaced by a stack of transistors in series does not require unused routing that is tied OFF to one Vcc or GROUND.

49. Inventions VII and XIV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case a plurality of transistors does not require determining whether a transistor can be replaced by a stack of transistors in series.

50. Inventions VIII and IX are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus

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as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case determining whether a programmable logic device is in standby mode does not require a routing pool.

51. Inventions VIII and XI are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case determining whether a programmable logic device is in standby mode does not require a plurality of power-down portions.

52. Inventions VIII and XII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case determining whether a programmable logic device is in standby mode does not require a plurality of sub-regions.

53. Inventions VIII and XIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case determining whether a programmable logic device is in standby mode does not require unused routing that is tied OFF to one Vcc or GROUND.

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54. Inventions VIII and XIV are related as process and apparatus for its practice.

The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case determining whether a programmable logic device is in standby mode does not require a plurality of transistors.

55. Inventions IX and X are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case minimizing the use of multiplexers that comprise one input that switches with a substantially greater frequency that the remaining inputs does not require a routing pool.

56. Inventions IX and XV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case a routing pool does not require evaluating a logic element to eventually reduce leakage current.

57. Inventions X and XII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus

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as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case minimizing the use of multiplexers that comprise one input that switches with a substantially greater frequency than the remaining inputs does not require a plurality of power-down portions.

58. Inventions X and XII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case minimizing the use of multiplexers that comprise one input that switches with a substantially greater frequency than the remaining inputs does not require a plurality of sub-regions.

59. Inventions X and XIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case minimizing the use of multiplexers that comprise one input that switches with a substantially greater frequency than the remaining inputs does not require unused routing that is tied OFF to one Vcc or GROUND.

60. Inventions X and XIV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP §

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806.05(e)). In this case minimizing the use of multiplexers that comprise one input that switches with a substantially greater frequency than the remaining inputs does not require a plurality of transistors.

61. Inventions XI and XV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a logic element is used for a design to eventually reduce leakage does not require a plurality of power-down portions.

62. Inventions XII and XV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a logic element is used for a design to eventually reduce leakage does not require a plurality of sub-regions.

63. Inventions XIII and XV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case evaluating whether a logic element is used for a design to eventually reduce leakage does not require unused routing that is tied OFF to one Vcc or GROUND.

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64. Inventions XIV and XV are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case a plurality of transistors does not require evaluating whether a logic element is used in a design in order to eventually reduce leakage current across a transistor.

65. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

66. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Brown whose telephone number is (571)272-

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5932. The examiner can normally be reached on Monday-Thursday from 7:00am to 5:30pm(EST).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIRS) system. Status information for the published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications are available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

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